

CLAIMS

1. A mobile station apparatus comprising:
 - a first receiver that performs first receive processing of a downlink data channel, including
5 demodulation, decoding, and error detection;
 - a second receiver that performs second receive processing of a downlink control channel that carries control information required in the first receive processing, including demodulation and decoding;
 - 10 a detector that detects a timing a transmit diversity mode changes in a base station apparatus that transmits the downlink data channel and the downlink control channel; and
 - a controller that stops one or both of the first
15 receive processing and the second receive processing depending on the timing detected in the detector.
2. The mobile station apparatus of claim 1, wherein, when the timing comes in a sub-frame period of a sub-frame of the downlink data channel, the controller stops the
20 first receive processing with respect to said sub-frame of the downlink data channel.
3. The mobile station apparatus of claim 1, wherein, when the second receive processing is stopped with respect to a sub-frame of the downlink control channel, the
25 controller stops the first receive processing with respect to a sub-frame of the downlink data channel the first receive processing of which is performed using

control information transmitted in said sub-frame of the downlink control channel.

4. The mobile station apparatus of claim 1, wherein, when the timing comes in a sub-frame period of a sub-frame of the downlink control channel, the controller stops the second receive processing with respect to said sub-frame of the downlink control channel.

5. The mobile station apparatus of claim 1, wherein, when the timing comes in a slot period N slots before a sub-frame period of a sub-frame of the downlink control channel, the controller stops the second receive processing with respect to said sub-frame of the downlink control channel, said N being a natural number.

6. A receiving method comprising:
15 performing first receive processing of a downlink data channel, including demodulation, decoding, and error detection;

performing second receive processing of a downlink control channel that carries control information required in the first receive processing, including demodulation and decoding;

detecting a timing a transmit diversity mode changes in a base station apparatus that transmits the downlink data channel and downlink control channel; and
25 stopping one or both of the first receive processing and second receive processing depending on the timing.